

Abstract Submitted
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Disks and Ring Structures Around Collapsed Objects Suitable for the Emergence of Jets¹ B. COPPI, M.I.T. — The emergence of jets from plasma accretion disks surrounding for instance a black hole requires that the magnetic energy densities within the disk be significant relative to the plasma pressure. Thus the axisymmetric equilibrium configurations, that can form in the strong gravitational field of a central object and where the currents within differentially rotating disks can produce a “crystal” magnetic structure², are shown to be characterized by strong modulations of the plasma density and pressure when the magnetic energy densities are comparable to the thermal energy densities. Moreover, when the external magnetic field in which the plasma is immersed is relatively weak, the internal currents can produce a configuration consisting of a sequence of plasma ring pairs³. The processes which can sustain these configurations are discussed.

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²B. Coppi, *Phys. Plasmas* **12**, 057302 (2005)

³B. Coppi, F. Rousseau, M.I.T. (LNS) Report HEP05/01 (2005), *submitted to Ap.J*

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